

WHAT IS CLAIMED IS:

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1. A person authentication system for executing person authentication by comparing a template with sampling information, the template being person authentication data, and the sampling information being input by a user, the person authentication system comprising:

a person authentication authority issuing a person authentication certificate storing template information including the template; and

a person authentication execution entity obtaining the template from the person authentication certificate issued by said person authentication authority and executing person authentication on the basis of the obtained template;

wherein the person authentication certificate issued by said person authentication authority stores usage restriction information which includes at least either a certificate expiration date or a certificate usage number limit; and

said person authentication execution entity checks the validity of the person authentication certificate on the basis of the certificate expiration date or the certificate usage number limit when the person authentication is executed on the basis of the person authentication certificate.

Cont'd *Jul 12* → A person authentication system according to Claim 1, wherein said person authentication execution entity checks the validity of the person authentication certificate on the basis of a certificate expiration date or a certificate usage number limit in person authentication processing on the basis of the person authentication certificate, and then executes the person authentication by comparing the template, stored in the person authentication certificate, with sampling information input by a user on the condition that the validity of the person authentication certificate has been confirmed on the basis of the certificate expiration date or the certificate usage number limit.

3. A person authentication system according to Claim 1, wherein said person authentication execution entity has a person authentication executing device, and the person authentication executing device executes the following processing when usage restriction information of a certificate usage number limit is stored in a person authentication certificate:

storing a set usage count in a memory of the person authentication executing device;

updating usage count data stored in the memory every time the person authentication certificate is used;

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determining whether the usage count data is within the limits of the set usage count of the person authentication certificate; and

executing person authentication by comparing user input sampling information with a template stored in the person authentication certificate if the usage count data is within the certificate usage number limit.

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4. A person authentication system according to Claim 1, wherein a person identification certificate issued by said person identification certificate authority stores a template expiration date which is information on an expiration date of the template stored in the person identification certificate; and

said person authentication execution entity checks the validity of the template on the basis of the template expiration date in person authentication processing on the basis of the person authentication certificate.

5. A person authentication system according to Claim 1, wherein said person authentication execution entity checks the validity of a template on the basis of a template expiration date in person authentication processing on the basis of the person authentication certificate, and then executes the person authentication by comparing the template.

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stored in the person authentication certificate, with sampling information input by a user on the condition that the validity of the template expiration date has been confirmed.

6. A person authentication system according to Claim 1, wherein said person authentication execution entity functions as an information processing apparatus, and the information processing apparatus checks the validity of the template expiration date or the expiration date of a person authentication certificate which is set in the certificate stored in the information processing apparatus and then outputs a request for issuing the person authentication certificate to said person identification certificate authority which issues the person authentication certificate when the validity can not be confirmed;

said person identification certificate authority makes the person authentication certificate in which a new expiration date is set and then issues the person identification certificate to the information processing apparatus; and

the information processing apparatus has storage means and stores the person identification certificate, which is issued by said person identification certificate authority, in the storage means.

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7. A person authentication system according to Claim 1, wherein said person identification certificate authority checks the validity of a template expiration date or an expiration date of an issued person identification certificate, and then gives notice to an entity received the person identification certificate of which a expiration date is approaching.

8. A person authentication system according to Claim 1, wherein said person identification certificate authority receives a request for updating an issued person authentication certificate from an entity received the person identification certificate, makes a person authentication certificate in which a updated expiration date or a updated certificate usage number limit is set according to the request, and then issues the person authentication certificate.

9. A person authentication system according to Claim 1, wherein said person identification certificate authority receives a request for updating the template, stored in a person identification certificate which has been issued, from an authenticated user of a person identification certificate; and

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said person identification certificate authority nullifies the person identification certificate according to the request and then makes a person identification certificate on the basis of a updated template.

10. A person authentication system according to Claim 1, wherein said person identification certificate authority receives data of a request for setting a template expiration date from an authenticated user of a person identification certificate, and then makes a person identification certificate in which a template expiration date is set on the basis of the data of the request for setting a template expiration date.

11. A person authentication system according to Claim 1, wherein said person identification certificate authority and said person authentication executing entity execute mutual authentication, when data communication is performed therebetween, a data transmitter puts a digital signature on transmitted data, and a data receiver verifies the digital signature.

12. A person authentication system according to Claim 1, wherein the template is personal biotic information such as fingerprint information, retina pattern information, iris

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pattern information, voice print information, and handwriting information;

personal nonbiotic information such as seal information, passport information, driver's license information, and card information;

any combination of the personal biotic information and the personal nonbiotic information; or

a combination of the above information and a password.

13. A person authentication system according to Claim 1, wherein said person identification certificate authority puts a digital signature on a person authentication certificate issued by said person identification certificate authority.

14. A person authentication method for executing person authentication by comparing a template with sampling information, the template being person authentication data, and the sampling information being input by a user, the person authentication method comprising:

causing a person authentication authority to issue a person authentication certificate storing template information including the template;

causing a person authentication execution entity to obtain the template from the person authentication

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certificate issued by the person authentication authority and to execute person authentication on the basis of the obtained template;

storing usage restriction information, which includes at least either a certificate expiration date or a certificate usage number limit, in the person authentication certificate issued by the person authentication authority ; and

causing the person authentication execution entity to check the validity of the person authentication certificate on the basis of the certificate expiration date or certificate usage number limit in person authentication processing on the basis of the person authentication certificate.

15. A person authentication method according to Claim 14, wherein a person authentication execution entity checks the validity of the person authentication certificate on the basis of a certificate expiration date or a certificate usage number limit in person authentication processing on the basis of the person authentication certificate, and then executes the person authentication by comparing the template, stored in the person authentication certificate, with sampling information input by a user on the condition that the validity of the person authentication certificate has

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been confirmed on the basis of the certificate expiration date or the certificate usage number limit.

16. A person authentication method according to Claim 14, wherein a person authentication execution entity has a person authentication executing device, and the person authentication executing device executes the following processing when usage restriction information of a certificate usage number limit is stored in a person authentication certificate:

storing a set usage count in a memory of the person authentication executing device;

updating usage count data stored in the memory every time the person authentication certificate is used;

determining whether the usage count data is within the limits of the set usage count of the person authentication certificate; and

executing person authentication by comparing sampling information, input by a user, with a template stored in the person authentication certificate if the usage count data is within the limits.

17. A person authentication method according to Claim 14, wherein the person identification certificate authority stores a template expiration date, which is information on

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an expiration date of a template stored in a person identification certificate made by the person identification certificate authority; and

a person authentication execution entity checks the validity of the template on the basis of a template expiration date in person authentication processing on the basis of the person authentication certificate.

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18. A person authentication method according to Claim 17, wherein the person authentication execution entity checks the validity of a template on the basis of a template expiration date in person authentication processing on the basis of a person authentication certificate, and then executes the person authentication by comparing the template, stored in the person authentication certificate, with sampling information input by a user on the condition that the validity of the template expiration date has been confirmed.

19. A person authentication method according to Claim 14, wherein said person authentication execution entity functions as an information processing apparatus; the information processing apparatus checks the validity of a template expiration date or a expiration date of a person authentication certificate which is set in the

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person authentication certificate stored in the apparatus, and then outputs a request for issuing the person authentication certificate to a person identification certificate authority which issues the person authentication certificate when the validity can not be confirmed;

the person identification certificate authority makes the person authentication certificate in which a new expiration date is set and then issues the person identification certificate to the information processing apparatus; and

the information processing apparatus has storage means and stores the person identification certificate, which is issued by the person identification certificate authority, in the storage means.

20. A person authentication method according to Claim 14, wherein the person identification certificate authority checks the validity of a template expiration date or an expiration date of an issued person identification certificate, and then gives notice to an entity received the person identification certificate of which a expiration date is approaching.

21. A person authentication method according to Claim 14, wherein the person identification certificate authority

receives a request for updating an issued person authentication certificate from an entity received the person identification certificate, then issues a person authentication certificate in which a updated expiration date or a updated certificate usage number limit is set according to the request, and issues a certificate usage number limit.

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22. A person authentication method according to Claim 14, wherein the person identification certificate authority receives a request for updating a template, stored in a person identification certificate which has been issued, from an authenticated user of a person identification certificate; and

the person identification certificate authority nullifies the person identification certificate according to the request and then makes a person identification certificate on the basis of a updated template.

23. A person authentication method according to Claim 14, wherein the person identification certificate authority receives data of a request for setting a template expiration date from an authenticated user of a person identification certificate, and then makes the person identification certificate in which a template expiration date is set on

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the basis of the data of the request for setting a template expiration date.

24. A person authentication method according to Claim 14, wherein the person identification certificate authority and the person authentication executing entity executes mutual authentication, when data communication is performed therebetween, a data transmitter puts a digital signature on transmitted data, and a data receiver verifies the digital signature.

25. An information processing apparatus for executing person authentication by comparing a template with sampling information, the template being person authentication data, and the sampling information being input by a user, the information processing apparatus comprising:

a section for storing the template to execute person authentication on the basis of a person authentication certificate issued by a person authentication certificate authority which is a third party; and

a section for checking the validity of the person authentication certificate on the basis of a certificate expiration date or certificate usage number limit in person authentication processing on the basis of the person authentication certificate, and then executes the person

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authentication by comparing the template, stored in the person authentication certificate, with the sampling information input by a user on the condition that the validity of the person authentication certificate has been confirmed on the basis of the certificate expiration date or certificate usage number limit.

26. An information processing apparatus for executing person authentication by comparing a template with sampling information, the template being person authentication data, and the sampling information being input by a user, the information processing apparatus comprising:

a section for storing the template to execute person authentication on the basis of a person authentication certificate issued by a person authentication certificate authority which is a third party;

a section for executing the following processing when usage restriction information of valid certificate usage number is stored in a person authentication certificate: storing a set usage count in a memory of the device; updating usage count data stored in the memory every time the person authentication certificate is used; determining whether the usage count data is within the limits of the set usage count of the person authentication certificate; and executing person authentication by comparing user input

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sampling information with a template stored in the person authentication certificate if the usage count data is within the limits.

27. An information processing apparatus for executing person authentication by comparing a template with sampling information, the template being person authentication data, and the sampling information being input by a user, the information processing apparatus comprising:

a section for storing the template to execute person authentication on the basis of a person authentication certificate issued by a person authentication certificate authority which is a third party; and

a section for checking the validity of the template on the basis of the template expiration date in person authentication processing on the basis of the person authentication certificate, and then executes the person authentication by comparing the template, stored in the person authentication certificate, with sampling information input by a user on the condition that validity of the template expiration date has been confirmed.

28. A program providing medium for proving a computer program which executes person authentication on the computer program by comparing a template with sampling information,

the template being person authentication data, and the sampling information being input by a user,
the computer program comprising:

a step of confirming whether usage restriction information, which includes either a certificate expiration date, a certificate usage number limit, or a template expiration date, is stored in a person authentication certificate issued by a person authentication certificate authority;

a step of checking the validity of the person authentication certificate on the basis of the certificate expiration date, the certificate usage number limit, or the template expiration date in person authentication processing on the basis of the person authentication certificate; and

a step of executing the person authentication by comparing the template, stored in the person authentication certificate, with sampling information input by a user on the condition that the validity of the person authentication certificate has been confirmed on the basis of the certificate expiration date, certificate usage number limit, or the template expiration date.
